

What is claimed is:

1. A magnetically induced super resolution-type magneto-optical recording medium comprising, on a light-transmitting substrate, at least a recording layer for recording and retaining information therein, and a read-out layer for copying therein the information retained in said recording layer during reproduction of the information, wherein:

10 an exchange-coupling breaking layer is disposed between said recording layer and said read-out layer, and said exchange-coupling breaking layer comprises a layer of a nitride of either one of GdFeCo or TbFeCo.

15 2. A magnetically induced super resolution-type magneto-optical recording medium comprising, on a light-transmitting substrate, at least a recording layer for recording and retaining information therein, a read-out layer for copying therein the information retained in said recording layer during reproduction of the information, and a read-out auxiliary layer, wherein:

an exchange-coupling breaking layer is disposed between said read-out auxiliary layer and said recording layer, and

25 said exchange-coupling breaking layer comprises a layer of a nitride of either one of GdFe or TbFeCo.

30 3. The magneto-optical recording medium according to claim 1, wherein said exchange-coupling breaking layer has a thickness in a range of from a one-atom layer thickness to 100 Å.

4. The magneto-optical recording medium according to
claim 2, wherein said exchange-coupling breaking layer
has a thickness in a range of from a one-atom layer
5 thickness to 100 Å.

5. A process for manufacturing a magnetically induced
super resolution-type magneto-optical recording medium
which comprises, on a light-transmitting substrate, at
10 least a recording layer for recording and retaining
information therein, and a read-out layer for copying
therein the information retained in said recording layer
during reproduction of the information, said process
comprising the steps of:

15 forming said read-out layer;
forming, on said read-out layer, an exchange-
coupling breaking layer comprising a layer of a nitride
of GdFeCo by sputtering; and
forming said recording layer on said exchange-
20 coupling breaking layer, wherein the step of forming said
exchange-coupling breaking layer is conducted by,
immediately before completion of said step for forming
the read-out layer, introducing N₂ into a chamber used
for forming said read-out layer so that a layer of a
25 nitride of GdFeCo having a thickness of a one-atom layer
thickness or more is formed in the chamber.

6. A process for manufacturing a magnetically induced
super resolution-type magneto-optical recording medium
30 which comprises, on a light-transmitting substrate, at
least a recording layer for recording and retaining

information therein, and a read-out layer for copying therein the information retained in said recording layer during reproduction of the information, said process comprising the steps of:

- 5 forming said read-out layer;
- forming, on said read-out layer, an exchange-coupling breaking layer comprising a layer of a nitride of TbFeCo by sputtering; and
- 10 forming said recording layer on said exchange-coupling breaking layer, wherein the step of forming said exchange-coupling breaking layer is conducted by, immediately before completion of said step for forming the read-out layer, introducing N₂ into a chamber used for forming said read-out layer so that a layer of a
- 15 nitride of TbFeCo having a thickness of a one-atom layer thickness or more is formed in the chamber.

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- 20 7. A process for manufacturing a magnetically induced super resolution-type magneto-optical recording medium which comprises, on a light-transmitting substrate, at least a recording layer for recording and retaining information therein, a read-out layer for copying therein the information retained in said recording layer during reproduction of the information, and a read-out auxiliary layer, said process comprising the steps of:

- 25 forming said read-out layer;
- forming said read-out auxiliary layer by sputtering;
- forming, on said read-out auxiliary layer, an exchange-coupling breaking layer comprising a layer of a
- 30 nitride of GdFe by sputtering; and
- forming said recording layer on said exchange-

coupling breaking layer, wherein the step of forming said exchange-coupling breaking layer is conducted by,

immediately before completion of said step for forming the read-out auxiliary layer by sputtering, introducing

5 N_2 into a chamber used for forming said read-out auxiliary layer so that a layer of a nitride of GdFe having a thickness of a one-atom layer thickness or more is formed in the chamber.

10 8. A process for manufacturing a magnetically induced super resolution-type magneto-optical recording medium which comprises, on a light-transmitting substrate, at least a recording layer for recording and retaining information therein, a read-out layer for copying therein the information retained in said recording layer during reproduction of the information, and a read-out auxiliary layer, said process comprising the steps of:

forming said read-out layer;

forming said read-out auxiliary layer by sputtering;

20 forming, on said read-out auxiliary layer, an

exchange-coupling breaking layer comprising a layer of a nitride of TbFeCo by sputtering; and

25 forming said recording layer on said exchange-coupling breaking layer, wherein the step of forming said exchange-coupling breaking layer is conducted by,

immediately after start of said step for forming the

recording layer by sputtering, introducing N_2 into a

chamber used for forming said recording layer so that a layer of a nitride of TbFeCo having a thickness of a one-

30 atom layer thickness or more is formed in the chamber.